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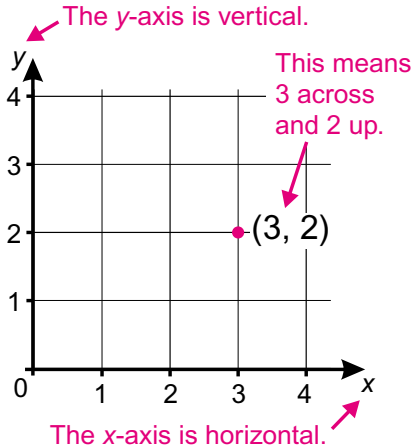
# Coordinates

## ● Coordinates

Coordinates are pairs of numbers that give the positions of points on a graph.

**(x, y)**

The first number of the pair is called the x-coordinate; the second number is called the y-coordinate. (Notice they are in alphabetical order, i.e. x comes before y.)



## ● Negative coordinates

To plot points that have negative coordinates you need to extend the axes back past zero. This splits the graph into 4 different sections.

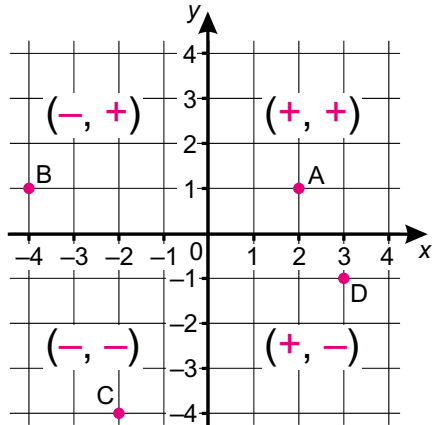
A is at (2, 1)

B is at (-4, 1)

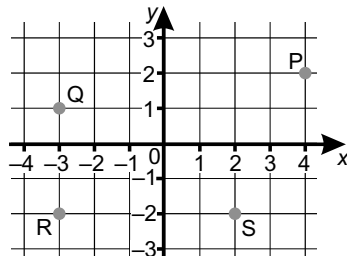
C is at (-2, -4)

D is at (3, -1)

**Remember: the first coordinate corresponds to the horizontal axis.**



Write down the coordinates of the points on the graph on the right.



TEST

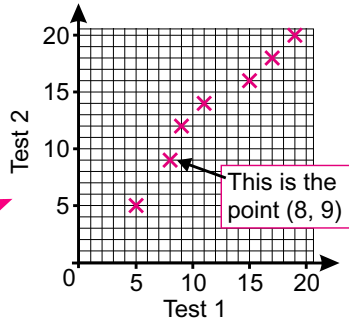
# Scatter graphs

## ● Plotting scatter graphs

This table shows some students' results for two maths tests.

Test 1	5	8	9	11	15	17	19
Test 2	5	9	12	14	16	18	20

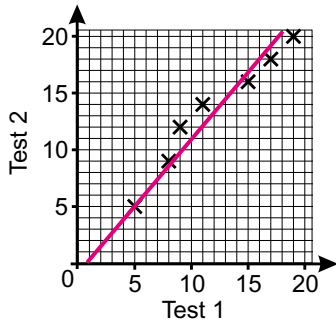
You can plot the points on a graph – this is a scatter graph.



## ● Line of best fit

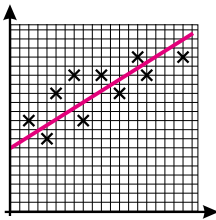
This is a line drawn on a scatter graph that shows the general direction of the points.

You should try to get the same number of points above the line as below.

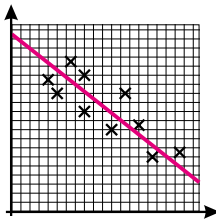


## ● Correlation

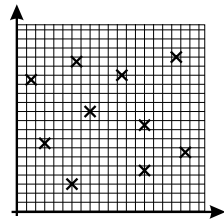
This is a fancy way of saying whether the points are related or not:



**Positive correlation** (↗)  
**Strong** if the points lie close to a straight line, otherwise weak.



**Negative correlation** (↘)  
**Strong** if the points lie close to a straight line, otherwise weak.



**No correlation**  
 The points seem to be randomly positioned.

Show the data as a scatter diagram.

Describe the correlation.

Age (years)	1	6	4	4	10	3	8	7	9
Value (£)	45	18	28	24	4	37	10	17	9

TEST